



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,271	11/26/2003	Rasmus B. Jensen	02716.0011.NPUS00	1257
27194 7590 02/20/2007 HOWREY LLP C/O IP DOCKETING DEPARTMENT 2941 FAIRVIEW PARK DRIVE, SUITE 200 FALLS CHURCH, VA 22042-2924			EXAMINER ANGEBRANDT, MARTIN J	
			ART UNIT 1756	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/20/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/724,271

Applicant(s)

JENSEN ET AL.

Examiner

Martin J. Angebrannt

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 15-25 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1756

1. The response of the applicant has been read and given careful consideration. Responses to the arguments of the applicant are presented after the first rejection to which they are directed.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14, drawn to optical recording media including proteorhodopsin, classified in class 430, subclass 270.15.
- II. Claims 15-16, drawn to a liquid ink containing a proteorhodopsin, classified in class 252, subclass 589.
- III. Claims 17-25, drawn to methods of forming solid suspensions of proteorhodopsins, classified in class 427, subclass 162.
- IV. Claims 26-30, drawn to recording in an optical recording medium containing proteorhodopsin, classified in class 430, subclass 269.
- V. Claim 31, drawn to printing with an ink containing proteorhodopsin, classified in class 347, subclass 1+.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions group I and group II are directed to related inventions. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the first is a solid composition where data is recorded on the basis of imagewise exposure with light and the ink image is formed using patternwise application of the ink

Art Unit: 1756

Inventions group I and group III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the polymer matrix can be formed and the proteorhodopsin imbibed into it.

Inventions group I and group IV are related and have been determined to present no significant search burden and so would be examined together.

Inventions group I and group V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not capable of use together and have different mode of operation.

Inventions group II and group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not disclosed as capable of use together and they have different modes of operation, and effects as one is an ink and the other an optical recording medium.

Inventions group II and group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not disclosed as capable of use together and they have different modes of operation, and effects as one is an ink and the other is a process of recording in an optical recording medium

Art Unit: 1756

Inventions group II and group V are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the ink may be applied onto a materials to provide a decorative pattern.

Inventions group III and group IV are directed to related inventions. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the inventions do not overlap in scope and have a materially different design, mode of operation, function, or effect as one is a process of forming and the other is an optical recording medium.

Inventions III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not disclosed as capable of use together and they have different modes of operation, and effects as one is a process of applying an ink and the other is an optical recording medium.

Inventions IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not disclosed as capable of use together and they have different modes of operation, and effects as

Art Unit: 1756

one is a process of applying an ink and the other is an process of recording in an optical recording medium.

4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Viola Kung (41,131) on July 20, 2006 a provisional election was made with traverse to prosecute the invention of group I, claims 1-14 (with claims 26-30 of group IV being examined with these as discussed above). Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-25 and 31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1756

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11-14, 26 and 28 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Dioumaev et al. "Proton Transfers in the photochemical reaction cycles of proteorhodopsin" Biochem., Vol. 41(17) pp. 5348-5358 (4/2002).

The photokinetics of the wild-type and the mutants D97E, D97 N and E108Q were observed with these encased in polyacrylamide gels. (page 5350 left column). The E108 has a larger M state intermediate concentration and is disclosed as a mutant having A similar phenotype to that of D96N of bacteriorhodopsin (BR) (page 5352, left column, last paragraph).

The rejection of claims to the methods holds that any exposure meets the claims including a flood exposure of the entire medium as there is no language concerning the size or proportion of the medium bearing the information.

With respect to the argued limitation in claim 11, the claims are to the materials, not the material applied to a paper of value or the like. Therefore the argued limitation is one of intended use. The difficulty in making the materials makes it useful as a fraud prevention material. With respect to claims 12-14, the fact that it is photosensitive makes it a an optical information carrier and the claims do not specify that the monomer or oligomer is free and not

Art Unit: 1756

encased, bound or the like to a polymer of the membrane. With respect to the arguments concerning claims 26 and 28. The claims do not preclude the selected portion being the entire layer. **The applicant could have specified “only a portion” or “only in selected locations” but has not chosen to do so.** The rejection stands.

10. Claims 1-4,8-14,26,28 and 29 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Friedrich et al. “Proteorhodopsin is a light driven proton pump with variable vectorality” J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002).

The measurement of absorption spectra with the proteorhodopsin embedded in 1 mm thick acrylamide gels. (page 835/left column). Teaching of the functional equivalence of proteorhodopsin and bacteriorhodopsin (BR) is from the published data (ref 3) presented (page 822/right column). The M state is shown to be present when the pH is 10 as evidenced by figure 5 and the pH 7 includes both M and O species. (page 824) The M state corresponds the to the 410 nm absorption, the K state the 560 nm absorption and the O state the 580 nm absorption. The initial state absorbs at 530 nm (page 824). The application of a blue light after illumination with yellow light is disclosed. (page 829/right column with respect to figures 8b and c). The proteorhodopsin is purified and reconstituted into dioleoylphospholipids with detergent adsorbing beads being added (right column, page 834).

The rejection of claims to the methods holds that any exposure meets the claims including a flood exposure of the entire medium as there is no language concerning the size or proportion of the medium bearing the information.

The applicant states that due to the use of reconstituted proteorhodopsin, the data relied upon by the examiner does not use the purified proteorhodopsin. The examiner notes that the

Art Unit: 1756

proteorhodopsin is reconstituted into dioeolylphospholipids (a detergent/surfactant, having a polar end and a non-polar tail) and detergent adsorbing beads are added. The examiner holds that these are the (detergent) solubilized proteorhodopsin referred to in the photobleaching section on page 834 and that these samples are those embedded into the acrylamide gel. (page 835). The examiner is holding the sample used in the visible spectroscopy as anticipatory (left column, first 4 full paragraphs, no the FT-samples below that.

The examiner holds that during the spectroscopic analysis there is a point at which multiple states are present. Claim 11 does not require a pattern to be formed and is directed to the material, so this is more of an intended use until the applicant adds some structure, such as describing a film and that the different solid materials are arranged to form a visually perceptible pattern. Claim 12 allows that form to be bound/immobilized and does not require these forms be in the free (unbound) state. The applicant argues that the analyses of Friedrich et al. do not use the materials in any optical applications. The applicant is correct, but the claims under prosecution are not limited in this manner as the method claims only require and exposure which changes the color. Claims 26, 28 and 29 do not require the optical image to be a pattern limited to **only** a portion of the material.

11. Claims 1-14 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich et al. "Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002), in view of Hampp et al. '279 and Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002).

Hamppe et al. '279 teaches that the bacteriorhodopsin longest lived intermediate state is the M state which absorbs at 410 nm. (2/24-42). Useful matrix materials include polyacrylamide, gelatin, agarose, agar, polyvinylpyrrolidone, polyvinyl alcohol, polyvinyl acetate, polyhydroxymethacrylate and polyacrylate (5/34-43). The use of a first wavelength to write information, a second to readout the information and a third to erase the information is taught (6/10-60) see also examples with writing and readout.

Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002) teaches that at pH 8 proteorhodopsin undergoes a photocycle similar to that of bacteriorhodopsin. (page 5-6, numbered 1 of 8 and 2 of 8). Figures 3-5 show the M state formation and this is further discussed on page 9 in the right column (numbered 5 of 8). The spectroscopic analysis is done in micelles. (page 11 (numbered 7 of 8)). The flash photolysis was performed in the presence of micelles or 1,2-dihexanoyl-SN-glycero-3-phosphocholine (considered a surfactant) and most of the detergent is removed as discussed on the eighth page. Further, the β -octyl-D-glucoside is used in a detergent extraction. (page 7 of 8). These pR samples are stable for several months (pages 2 of 8, bottom right). The purification results in an 85% purity and requires less time or effort than for bR membrane of similar purity.

It would have been obvious to one skilled in the art to modify the examples of Friedrich et al. "Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002) by using other matrix materials, such as gelatin, agarose, agar, polyvinylpyrrolidone, polyvinyl alcohol, polyvinyl acetate, polyhydroxymethacrylate or polyacrylate, in place of the polyacrylamide with a reasonable expectation of forming a useful

Art Unit: 1756

optical recording medium or medium for spectroscopic studies of proteorhodopsin based upon the disclosure of equivalence by Hampp et al. '279 and/or it would have been obvious to modify the examples of Friedrich et al. "Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002) by using light to write information by changing the proteorhodopsin to its M state in certain areas and erasing that information with exposure to light of another wavelength as taught by Hampp et al. '279 based upon these compounds being Archaeal rhodopsins exhibiting photosensitivity and the same stable states and further it would have been obvious to use the methods described to purify the pR described by Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002) as this is stated to result in >85% purity.

The position of the examiner is that the dioeolylphospholipids are detergents/surfactants and that the comparison with membrane BR is not better or equal to a comparison with the primary reference on the basis that the primary reference uses proteorhodopsin and which is free of the membrane, therefore the argued position relying upon the disclosure cannot obviate this rejection. Further, the purification disclosed (but not specifically claimed) by the applicant is similar to that of Krebs et al. (and Dencher et al.)

12. Claims 1-14 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich et al. "Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002), in view of Hampp et al. '279 and Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002), further in view of Wu

Art Unit: 1756

et al. "Bacteriorhodopsin encapsulated in transparent solgel glass: A new biomaterial", Chem. Mater. Vol. 5 pp. 115-120 (1993).

Wu et al. "Bacteriorhodopsin encapsulated in transparent solgel glass: A new biomaterial", Chem. Mater. Vol. 5 pp. 115-120 (1993) teaches the formation of a sol-gel silica matrix which allows the photocycle of bacteriorhodopsin to be used including the M state (see figure 5) and the use of this in optical imaging (abstract and page 120).

In addition to the basis provided above, the examiner holds that it would have been obvious to modify the combination of Friedrich et al. "Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol. 321(5) pp. 821-838 (8/2002) with Hampp et al. '279 by using other matrices known to preserve the properties of rhodopsins, such as the sol-gel glasses taught by Wu et al. "Bacteriorhodopsin encapsulated in transparent solgel glass: A new biomaterial", Chem. Mater. Vol. 5 pp. 115-120 (1993) with a reasonable expectation of forming a useful optical recording medium or medium for spectroscopic studies of proteorhodopsin.

The rejection stands for the reasons above as no further arguments were directed at this rejection beyond those addressed above.

13. Claims 1-14 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hampp et al. '279, in view of Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002).

Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002) teaches that at pH

Art Unit: 1756

8 proetorhodopsin undergoes a photocycle similar to that of bacteriorhodopsin. (page 5-6, numbered 1 of 8 and 2 of 8). Figures 3-5 show the M state formation and this is further discussed on page 9 in the right column (numbered 5 of 8). The spectroscopic analysis is done in micelles. (page 11 (numbered 7 of 8)). The flash photolysis was performed in the presence of micelles or 1,2-diheptanoyl-SN-glycero-3-phosphocholine (considered a surfactant) and most of the detergent is removed as discussed on the eighth page. Further, the β -octyl-D-glucoside is used in a detergent extraction. (page 7 of 8). These pR samples are stable for several months (pages 2 of 8, bottom right)

It would have been obvious to one skilled in the art to modify the examples of Hampp et al. '279 by using other Archaeal rhodopsin pigments, such as proteorhodopsin taught by Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002) with a reasonable expectation of forming a useful optical recording medium based upon these compounds being Archaeal rhodopsins exhibiting photosensitivity and the same stable states. Further, it would have been obvious to modify the resultant examples by using light to write information by changing the proteorhodopsin to its M state in certain areas and erasing that information with exposure to light of another wavelength as taught by Hampp et al.

The applicant does not present any arguments relating to this rejection, but the examiner notes that Krebs et al. teaches octylglucoside and diheptanoylphosphatidylcholine which is similar to the dodecyl- β -maltoside of the applicant at [0084-0090] in the prepub of the instant application. The applicant is invited to show that the use of dodecyl- β -maltoside as the surfactant results in unobvious benefits relative to octylglucoside or

Art Unit: 1756

diheptanoylphosphatidylcholine. Any showing would have to be commensurate in scope with the coverage sought.

14. Claims 1-14 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hampp et al. '279, in view of Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002), further in view of Wu et al. "Bacteriorhodopsin encapsulated in transparent solgel glass: A new biomaterial", Chem. Mater. Vol. 5 pp. 115-120 (1993).

In addition to the basis provided above, the examiner holds that it would have been obvious to modify the combination of Hampp et al. '279 with Krebs et al., "Detection of fast light activated H⁺ release and M intermediate formation from proteorhodopsin", BMC Physiology, Vol. 2 pp. 5-12 (8 pages) (04/2002) by using other matrices known to preserve the properties of rhodopsins, such as the sol-gel glasses taught by Wu et al. "Bacteriorhodopsin encapsulated in transparent solgel glass: A new biomaterial", Chem. Mater. Vol. 5 pp. 115-120 (1993) with a reasonable expectation of forming a useful optical recording medium or medium for spectroscopic studies of proteorhodopsin.

The rejection stands for the reasons above as no further arguments were directed at this rejection beyond those addressed above.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimono et al. 'Functional expression of pharonis phoborhodoppsin in eshericha coli', FEBS Lett., Vol. 420 (1) pp. 54-56 (1997) is cited as reference 9 in Friedrich et al.

"Proteorhodopsin is a light driven proton pump with variable vectorality" J. Mol. Biol. Vol.

Art Unit: 1756

321(5) pp. 821-838 (8/2002) and describes including octylglucoside in the composition used for flash spectroscopy. (page 54/lower right column).

Dencher et al. 'Formation and properties of bacteriorhodopsin monomers in the non-ionic detergents octyl- β -glucoside and triton X-100', FEBS Lett, Vol. 96(2) pp. 322-326 (12/1978) teaches the formation of bR compositions to form micelles with detergents

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

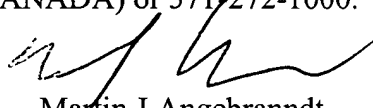
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Martin J Angebranndt
Primary Examiner
Art Unit 1756

02/14/2007